

LISTING OF THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Original): A roller guide assembly (14) for an elevator system (10) comprising:
a roller (16) having a hardness that varies responsive to a magnetic field (20).
2. (Original): The assembly of claim 1, wherein the roller (16) includes a membrane (30) containing a fluid (22) having a viscosity that changes responsive to said magnetic field (20).
3. (Original): The assembly of claim 2, wherein said fluid (22) comprises a magnet-rheological fluid.
4. (Original): The assembly of claim 2, wherein the membrane (30) defines a generally annular chamber (36) supported about a disk (31).
5. (Original): The assembly of claim 1, including a magnetic field generator (18) adjacent said roller (16), said magnetic field generator (18) selectively controllable to vary the hardness of said roller (16).
6. (Original): The assembly of claim 5, including a plurality of said rollers (16) and a corresponding plurality of separately actuatable magnetic field generators (18).
7. (Original): The assembly of claim 5, wherein said magnetic field generator (18) comprises an electromagnet (21).
8. (Original): The assembly of claim 5, wherein said magnetic field generator (18) comprises a permanent magnet (19).

9. (Original): An elevator system (10) comprising:
at least one guide rail (28);
an elevator car (12) movable along the guide rail (28);
a roller (16) supported for movement with said elevator car (12), said roller (16) rolling along a surface of said guide rail (28) and having a hardness that varies responsive to a magnetic field (20); and
a magnetic field generator (18) that selectively generates said magnetic field (20).

10. (Original): The system of claim 9, wherein said roller (16) includes a membrane (30) containing a fluid (22), said fluid (22) having a viscosity that changes responsive to said magnetic field (20).

11. (Original): The system of claim 10, wherein said membrane (30) defines a generally annular chamber (36) supported about a disk (31).

12. (Original): The system of claim 10, wherein said membrane (30) is in rolling contact with said surface of said guide rail (28).

13. (Original): The system of claim 9, including a plurality of rollers (16) and a corresponding plurality of magnetic field generators (18).

14. (Original): The system of claim 13, including a controller (24) that selectively and individually controls the magnetic field generators (18).

15. (Original): The system of claim 9, including a sensor device (26) that provides information regarding the orientation of said elevator car (12) and a controller (24) that receives information from said sensor device (26) and responsively controls said magnetic field (20) generator to vary said roller hardness.

16. (Original): A method of controlling vibration of an elevator car (12) that has an associated plurality of rollers (16) adapted to guide the elevator car (12) along a guide rail (28) comprising the steps of:

- a) determining a condition of the elevator car (12) relative to a desired condition; and
- b) selectively varying a hardness of at least one of the rollers (16) responsive to said determined condition.

17. (Original): The method of claim 16, including providing the rollers with a fluid having a viscosity that changes responsive to a magnetic field and wherein step (b) includes selectively varying a magnetic field associated with a specific roller (16).

18. (Original): The method of claim 17, including varying the strength of the magnetic field (20) independently for each of the rollers (16).

19. (Original): The method of claim 16, wherein step (a) includes determining a level of vibration of the car as the car moves along the guide rail.